CLAIMS

1. A method of selectively targeting a composition, selected from the group of: (a) particles, excluding liposomes, having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5; (b) molecules having an isoelectric point above 7.5; (c) liposomes containing cationic lipids in the range of about 25 mol% to 50 mol%; (d) magnetosomes with a cationic lipid layer having a zeta potential in the range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5 and (e) oil-in-water emulsions or microemulsions containing cationic amphiphiles in the outer layer in the range of about 25 to 60 mol% or having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KC1 solution at about pH 7.5.

2. The method of claim 1, wherein the activated vascular site is selected from the group consisting of: (a) sites of angiogenesis; (b) sites of inflammation; (c) sites of wound healing; and (d) the blood brain barrier.

3. An imaging composition for selective targeting to an activated vascular site, comprising an imaging agent and a carrier selected from the group consisting of: (a) particles, excluding liposomes, having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5; (b) molecules having an isoelectric point above 7.5; and (c) liposomes containing cationic lipids in the range of about 25 mol% to 50 mol%; (d) magnetosomes with a cationic lipid layer having a zeta potential in the range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5 and (e) oil-in-water emulsions or microemulsions containing cationic amphiphiles in the outer layer in the range of about 25 to 60 mol% or having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5.

4. The imaging composition of claim 3, wherein the imaging agent is selected from the group consisting of iron oxide particles, dyes, fluorescent dyes, NMR labels, scintigraphic labels, gold particles, PET labels, ultrasound contrast media, and CT contrast media.

5. A method of selectively targeting an imaging agent to a site of angiogenesis in an animal, comprising the steps of administering to the animal a composition according to claim 3 or 4, and allowing the composition to selectively accumulate to a diagnostically effective level in the vicinity of the site of angiogenesis.

6. The method of claim 5, wherein the composition is administered by a route selected from the group consisting of oral administration, intravenous administration, transdermal administration, subcutaneous administration, intraperitoneal administration, intratumoral administration, intraarterial administration, intramuscular administration, instillation and aerosol administration.

7. A therapeutic composition for selective targeting to an activated vascular site, comprising a therapeutically effective amount of an active ingredient and a carrier, the composition being selected from the group consisting of: (a) particles, excluding liposomes, having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5; (b) molecules having an isoelectric point above 7.5; (c) liposomes containing cationic lipids in the range of about 25 mol% to 50 mol%; (d) magnetosomes with a cationic lipid layer having a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5; (e) oil-in-water emulsions or microemulsions containing cationic amphiphiles in the outer layer in the range of about 25 to 60 mol% or having a zeta potential in the range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5.

8. The therapeutic composition of claim 7 wherein the active ingredient is selected from the group consisting of cytostatics and cytotoxic agents.

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9. The therapeutic composition of claim 8, wherein the cytostatics and cytotoxic agents are selected from the group consisting of taxanes, inorganic complexes, mitose inhibitors, hormones, anthracyclines, antibodies, topoisomerase inhibitors, antiinflammtory agents, alkaloids, interleukins, cytokines, growth factors, proteins, peptides, and tetracyclines.

10. A method of selectively targeting a therapeutic composition to a site of angiogenesis in an animal comprising the step of administering to the animal a composition according to claim 7 or 8, and allowing the composition to selectively accumulate to a therapeutically effective level in the vicinity of the site of angiogenesis.

11. The method of claim 5 or 10, wherein the animal is a mammal.

12. The method of claim 10, wherein the composition is administered by a route selected from the group consisting of oral administration, intravenous administration, intramuscular administration, transdermal administration, subcutaneous administration, intraperitoneal administration, intratumoral adminstration, intraarterial administration, instillation and aerosol administration.

13. A method for enhancing the selective association of a composition at an activated vascular site, comprising the step of modifying the composition to have one or more of the characteristics selected from the group consisting of: (a) a zeta potential in the range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5; and (b) an isoelectric point between above 7.5.

14. The method of claim 1, wherein the activated vascular site is indicative of an angiogenesis associated disease.

15. The method of claim 14, wherein the angiogenesis associated disease is selected from the group consisting of diabetic retinopathy, chronic inflammatory diseases, rheumatoid arthritis, dermatitis, psoriasis, stomach ulcers, hematogenous and solid tumors as well as metastases thereof.

16. The method of claim 1, wherein the composition has been modified to increase its zeta potential to a level of at least about +25 mV.

17. The method of claim 1, wherein the composition has been modified through a reaction with a cation forming reagent that increases the isoelectric point of the agent relative to the non-modified agent to a value above 7.5.

18. The method of claim 17, wherein the composition has been modified by reacting with a cation forming reagent selected from the group consisting of ethylene diamine, hexamethylenediamine, triethylene tetraamine, 4-dimethylamino butylamine, N, N-dimethylaminoethyl amine, dimethylamino benzaldehyde, polylysine, and chitosan.

19. The method of claim 17, wherein the composition comprises a peptide or a protein.

20. A therapeutic composition comprising an active ingredient that is therapeutically effective for the treatment of an angiogenesis associated disease, the composition having a zeta potential within a range of about +25 mV to +100 mV in about 0.05 mM KCl solution at about pH 7.5 or an isoelectric point above 7.5, the composition further being labeled or packaged with directions for the administration of the composition to treat an angiogenesis associated disease.

21. A therapeutic composition comprising an active ingredient that is therapeutically effective to inhibit inflammation, the composition having a zeta potential within a range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5 or an isoelectric point above

7.5, the composition further being labeled or packaged with directions for the administration of the composition to inflammation.

22. A therapeutic composition comprising an active ingredient that is therapeutically effective to promote bone repair or wound healing, the composition having a zeta potential within a range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5 or an isoelectric point above 7.5, the composition further being labeled or packaged with directions for the administration of the composition to promote bone repair or wound healing.

23. A diagnostic composition comprising an active ingredient that is diagnostically effective for the diagnosis or imaging of an angiogenesis associated disease, the composition having zeta potential within a range of about +25 to +100 mV in about 0.05 mM KCl solution at about pH 7.5 or an isoelectric point above 7.5, the composition further being labeled or packaged with directions for the administration of the composition to diagnose or image an angiogenesis associated disease.

24. The therapeutic composition of claim 7, wherein the active ingredient is selected from the group consisting of etherlipid, alkyllysolecithin, alkyllysophopholipid, lysolipid, alkylphospholipid.

25. The therapeutic composition of claim 24, wherein the etherlipid is selected from the group consisting of 1-O-octadecyl-2-O-methyl-rac-glycero-3-phosphocholine, 1-O-Hexadecyl-2-O-methyl-sn-glycerol, Hexadecyl phosphocholine, Octadecylphosphocholine.

26. The method of claim 1, wherein the composition comprises particles having a zeta potential in the range of about +25 mV to +60 mV in about 0.05 mM KCl solution at about pH 7.5.

27. The method of claim 26, wherein the composition comprises particles having a zeta potential in the range of about +30 to +50 mV in about 0.05 mM KCl solution at about pH 7.5.

28. The imaging composition of claim 3, wherein the composition comprises particles having a zeta potential in the range of about +25 mV to +60 mV in about 0.05 mM KCl solution at about pH 7.5.

29. The composition of claim 28, wherein the composition comprises particles having a zeta potential in the range of about +30 to +50 mV in about 0.05 mM KCl solution at about pH 7.5.

30. The therapeutic composition of claim 7, wherein the composition comprises particles having a zeta potential in the range of about +25 mV to +60 mV in about 0.05 mM KCl solution at about pH 7.5.

31. The composition of claim 30, wherein the composition comprises particles having a zeta potential in the range of about +30 to +50 mV in about 0.05 mM KCl solution at about pH 7.5.

32. The method of claim 12, wherein the composition is modified to increase or decrease its zeta potential to fall within the range of about +25 mV to +60 mV in about 0.05 mM KCl solution at about pH 7.5.

33. A method for identifying an optimal range of zeta potential for a composition for targeting to a specific site comprising evaluating zeta potential for the composition, wherein the composition is associated with different amounts of a cationic component, and identifying an optimal range of zeta potential.

34. A method of modifying a composition to enhance its efficacy comprising the associating of cationic components with the composition to produce a composition having an optimal range of zeta potential.

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